

What is claimed is:

1. A time-matching system comprising:

a first terminal device receiving a GPS (Global Positioning System) data from a GPS satellite; and

5 a communications relay device relaying communications between said first terminal device and a second terminal device on a wireless communications network,

wherein said first terminal device executes a  
10 first correction procedure on a satellite time-data of said GPS data to generate a first time-data, and transmits said first time-data to said communications relay device,

said first correction procedure being based on a  
15 time delay in communications between said GPS satellite and said first terminal device,

wherein said communications relay device receives said first time-data, executes an intermediate correction procedure on said first time-data to  
20 generate an intermediate time-data, and transmits said intermediate time-data to said second terminal device, and

said intermediate correction procedure being based on a time delay in communications between said  
25 first terminal device and said communications relay device.

2. The time-matching system according to claim 1, wherein said first terminal device adds to said first time-data, a priority-data indicative of reliability of said first time-data in said first correction

5 procedure, and

said communications relay device determines whether reception of said first time-data is permitted or not based on an address of said first terminal device, and determines whether said intermediate  
10 correction procedure is permitted or not based on said priority-data.

3. The time-matching system according to claim 2, wherein said communications relay device adds to said  
15 intermediate time-data, said priority-data in said intermediate correction procedure, and

said second terminal device receives said intermediate time-data, determines whether a second correction procedure is permitted or not based on said  
20 priority-data, executes said second correction procedure on said intermediate time-data to generate a second time-data, and calibrates a clock of said second terminal device based on said second time-data,

said second correction procedure being based on a  
25 time delay in communications between said communications relay device and said second terminal device.

4. A terminal device comprising:

a GPS receiver receiving a GPS-data from a GPS satellite and outputting said GPS-data;

a data processing device connected to said GPS receiver and receiving said GPS-data from said GPS-receiver,

wherein said data processing device extracts a satellite time-data from said GPS-data, executes a correction procedure on said satellite time-data to generate a corrected time-data, and transmits said corrected time-data to a destination on a wireless communication network,

said correction procedure being based on a time delay in communications between said GPS satellite and said GPS receiver.

5. The terminal device according to claim 4, wherein said data processing device adds to said corrected time-data, a priority-data indicative of reliability of said corrected time-data, and transmits said corrected time-data to said destination.

6. A communications relay device relaying wireless communications between a first terminal device and a second terminal device, in which said first terminal device receives a GPS-data from a GPS-satellite, and generates from said GPS-data a first time-data

including a priority-data indicative of reliability of said first time-data, comprising:

a priority comparing unit receiving said first time-data from said first terminal device and

5 permitting an intermediate correction procedure on said first time-data based on said priority-data;

a delay calculating unit executing said intermediate correction procedure on said first time-data to generate an intermediate time-data, said  
10 intermediate correction procedure being based on a time delay in communications between said first terminal device and said delay calculating unit;

a clock; and

a time setting unit calibrating said clock based  
15 on said intermediate time-data,

wherein said intermediate time-data is transmitted to said second terminal device.

7. The communications relay device according to  
20 claim 6, wherein said priority comparing unit determines whether reception of said first time-data is permitted or not based on an address of said first terminal device, and determines whether said intermediate correction procedure is permitted or not  
25 based on said priority-data.

8. A terminal device communicating with another

terminal device through a wireless communications relay device which executes an intermediate correction procedure on a satellite time-data provided by a GPS satellite to generate an intermediate time-data  
5 including a priority-data indicative of reliability of said intermediate time-data, comprising:

a priority comparing unit receiving said intermediate time-data from said wireless communications relay device and permitting a  
10 correction procedure on said intermediate time-data based on said priority-data;

a delay calculating unit executing said correction procedure on said intermediate time-data to generate a corrected time-data, said correction  
15 procedure being based on a time delay in communications between said wireless communications relay device and said delay calculating unit;

a clock; and

a time setting unit calibrating said clock based  
20 on said corrected time-data.

9. A time-matching method comprising:

(a) a first terminal device generating a first time-data by executing a first correction procedure on  
25 a satellite time-data received from a GPS satellite, said first correction procedure being based on a time delay in communications between said GPS-satellite and

said first terminal device;

(b) said first terminal device calibrating a clock of said first terminal device based on said first time-data;

5 (c) said first terminal device transmitting said first time-data wirelessly to a communications relay device;

(d) said communications relay device receiving said first time-data and generating an intermediate  
10 time-data by executing an intermediate correction procedure on said first time-data, said intermediate correction procedure being based on a time delay in communications between said first terminal device and said communications relay device; and

15 (e) said communications relay device transmitting said intermediate time-data to a second terminal device different from said first terminal device.

10. The time-matching method according to claim 9,  
20 wherein said (a) generating includes:

(a1) adding to said first time-data a priority-data indicative of reliability of said first time-data in said first correction procedure,

wherein said (d) receiving and executing  
25 includes:

(d1) said communications relay device determining whether reception of said first time-data is permitted

or not based on an address of said first terminal device; and

(d2) said communications relay device determining whether said intermediate correction procedure is permitted or not based on said priority-data.

11. The time-matching method according to claim 9 further comprising:

(f) said second terminal device receiving said intermediate time-data and generating a second time-data by executing a second correction procedure on said intermediate time-data, said second correction procedure being based on a time delay in communications between said communications relay device and said second terminal device; and

(g) said second terminal device calibrating a clock of said second terminal device based on said second time-data.

12. The time-matching method according to claim 11, wherein said (f) generating includes (f1) determining whether said second correction procedure is permitted or not based on said priority-data.